[SE2-CV-1] Missile Defense

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Full Summary

The 2011 Asan Plenum session titled "Missile Defense" took place from 17:15-18:30 on Monday, June 13 in the Cosmos/Violet room at the Westin Chosun hotel. The panel featured experts Dr. Paul Davis (Moderator), Pardee RAND Graduate School, Dr. James Bonomo, Pardee RAND Graduate School, and Dr. Kim Taewoo, Korea Institute for Defense Analyses (KIDA).

Dr. Bonomo began his remarks by pointing out that missile defense is often conflated with nuclear weapons and weapons of mass destruction (WMD). The assumed connection, which is seen in documents such as the 2011 National Military Strategy of the United States of America, can result in misunderstandings and mislead publics. Therefore, the missile defense options for South Korea should be analyzed separately from a broader discussion about missile defense precisely because the context is very different.

With this in mind, Dr. Bonomo laid out four common assumptions made about missile defense. First, as noted above, there is a presumed tight connection between ballistic missiles and the delivery of nuclear weapons. For the United States, missile defense is largely about nuclear weapons. Other weapons of mass destruction (WMD) are not terribly effective at long ranges. Missile defense, meanwhile, could offer some hope of damage limitation against a threat from Iran. Second, many argue that missile defense is costly and subject to serious technical limitations. Third, South Korean participation in U.S. Theater Missile Defense (TMD) could be provocative to Russia and China, who will worry about the impact on their missile forces. While U.S. missile defense capabilities, including the Phased Adaptive Approach, are currently too small to seriously worry the Chinese and Russia, missile defense cooperation strengthens ties with U.S. partners in the region and could eventually undermine the Chinese and Russian ability to threaten these nations. South Korean missile defense would also be provocative to North Korea. Fourth, missile defense systems are not very important for South Korea because North Korea has many short-range rockets, and other weapons systems, that could threaten Seoul.

After laying out these four assumptions, Dr. Bonomo went through each and discussed why it does not fully make sense in the context of South Korea. With respect to the purported linkage, Dr. Bonomo pointed out that nuclear weapons can be delivered without ballistic missiles and vice versa. Nuclear weapons could also be smuggled in to South Korea, used in a Special Forces operation, or even be delivered by small submarines. None of these are practical long-range options but each could still threaten South Korea. At the same time, South Korea is threatened by a range of ballistic missiles that are not capable of carrying nuclear weapons. This distinction has important implications for the role of missile defense. While missile defense could play a damage limitation role for some military targets, it should not be seen as a wholesale defense against missile attacks. Yet missile defense could nonetheless play a useful role in a quilt work of active and passive defenses. It will not eliminate casualties but it could allow the government to play preferential defense games and perhaps even limit some damage to cities. Missile defense can also have a political impact, as seen when the ineffectual PAC-2 systems in the Gulf proved reassuring to Riyadh and Tel Aviv.

In response to concerns about technology and cost, Dr. Bonomo argued that technology has improved substantially in the past 25 years due to U.S. investment. Missile defense has proven technologically capable against some shorter range, less advanced missile systems which are similar to the threats facing South Korea. Dr. Bonomo suggested that, given their practical applicability, the cost of missile defense should be viewed as another military capability subject to the same cost/benefit analysis as other programs rather than a symbolic program independent of military needs.

The most appropriate missile defense capabilities for South Korea would also pose little threat to Russian and Chinese missile capabilities. Their long-range, faster missile would still be able to hold at risk South Korea. Moreover, it would be difficult to claim that South Korean missile defense would provide the United States with valuable early warning capabilities. Increased South Korean commitment to missile defense could make it more acceptable elsewhere in the world (e.g., Taiwan) but this objection is about missile defense writ large as opposed to specific platforms. North Korea, meanwhile, will object to any defense. Moreover, it is also important to remember that the U.S. is already deploying PAC-3 assets on Aegis ships in the region.

Finally, the argument about the vulnerability of Seoul is misapplied to the missile defense debate. Seoul can be considered vulnerable to any number of military threats. South Korea has decided to create a conventional defense against lower level provocations and ballistic missile defense could be a part of that. Other defense systems, such as the Israeli Iron Dome system, are geared towards very-short range rockets. That said, it is

important to understand the value that missile defense could provide. It will not stop an attack or intercept every rocket that could be sent but it could limit causalities and provide the South Korean leadership with some decision-making space.

Taken together, these arguments should not be read as a full-fledged endorsement of missile defense. Instead, missile defense should be viewed in the same light as other military capabilities: it should be analyzed to determine whether the benefits are worth the costs. Some level of integration, including radar and command and control, is an essential, albeit political, requirement for a South Korean missile defense system. Viewed through the lens of a standard defense capability, it is important that the force structure is purchased in quantities sufficient to meet its goals. The 2010 Ballistic Missile Defense Review (BMDR) is a welcome development for the decision to purchase more TMD assets. At the same time, South Korea's 48 PAC-3s will not be able to add much capability. The country is considering improvements to PAC-3 capabilities and Aegis interceptors. Such a decision should be made by the same tradeoffs that guide other military procurements as opposed to the political implications of the system, which can be tackled once decisions are made.

Dr. Kim followed up Dr. Bonomo's remarks by asking some tough questions about limits to what missile defense can achieve. He noted that while cooperation has strengthened over missile defense, there still remains confusion about missile defense. There are four large areas ripe for discussion in South Korea: technical capabilities, political limits of the system, force construct priorities, and the capability of the South Korean leadership.

The first major question that must be addressed is the technical capability of any missile defense. Some questions that should be asked include:
-Is a nuclear attack defendable?
-Is a biochemical attack defendable?
-Can the damage from a North Korean WMD attack be contained?
-Is a conventional missile attack defendable?
-Can the Phased Adaptive Approach defend against artillery shells?
-Given that North Korea has the capability to launch 500,000 shells per hour, is missile defense useful?

In addition to these questions, South Korea also must think hard about the political limits of missile defense. One of the primary political concerns about South Korea pursuing missile defense is the adverse reaction from China. If this is the case, how far should South Korea be willing to go? A serious push for missile defense could invite unwelcome Chinese hostility. This dynamic can be seen by groups in the domestic population who do not support increased missile defense cooperation with the United States.

The debate about missile defense also must be subject to rigorous analysis of defense priorities for South Korea. The country has a limited defense budget and national defense goals, such as missile defense, do not correlate well with the inter- and intra-service goals. Even within the Army, for instance, the artillery want to strengthen the artillery, others argue for more missiles, and still others want more tanks and mortars. The debate in the Navy between submarines and surface ships is another example.

Dr. Kim's last concern was the commitment of South Korea's leadership. While he hopes political leaders share the devotion to protect the nation, it is not always self-evident. The political pressures on leaders force leaders to fight for more votes and follow the popular issues. Dr. Kim hopes they work to deeply understand defense issues. Similarly, he hopes the military leadership is highly capable of protecting the nation.
In closing, Dr. Kim cited a distinction between defense and deterrence. In his view, more emphasis should be placed on deterrence as opposed to defense, including missile defense, because of the serious technical limitations to defending against the North Korea threat. Therefore, the focus should move from missile defense to retaliation capabilities. One such idea, suggested in the defense reform commission, is conventional trident systems. Currently, North Korea can target all of South Korea but the opposite is not true. Dr. Kim noted that the differences between his remarks and Dr. Bonomo's were not that great. On the discussion of angering China, Dr. Kim argues that if the philosophy is to strengthen the U.S.-ROK alliance even if it risks a deterioration of relations with China, then the policy should move forward. It is important for South Korea to explain to China why it is advancing this policy while finding other ways, such as economic interdependence, to improve relations.

After the panelist's remarks, Dr. Paul Davis, the moderator, provided some background to frame the discussion about missile defense. He noted that while World War II certainly had defenses, there was not a problem in the 1950's of missiles with nuclear weapons. Nonetheless, work continued on defenses but it looked really hard, technically speaking, to defense against a long-range ballistic missile from a competent attacker. In the 1960's, however, that began to change as evidenced by ratification of the Anti-Ballistic Missile (ABM) Treaty and the Strategic Arms Limitations Treaty (SALT). Thanks to changes in ideas and advances in technology, the 1980's saw a lot of money spent on missile defense but it was still preferable to be a countermeasures engineer as opposed to an interceptor engineer. Most of the 1990's was just research and development. The 1998 Rumsfeld Commission, however, was notable because it helped show that the ballistic missile threat was not just from Russia and China but also other countries, such as Iran and North Korea, who could have nuclear weapons with long-range missiles. What bothered many on the commission, including Rumsfeld, was how naked the United States was against these threats. President

Bush and Secretary of Defense Rumsfeld both pushed really hard to actually deploy missile defense, albeit without much testing. The system's ability to shoot down the Chinese satellite in 2008 was a really big deal, particularly because of the ramifications a failure would have had for the program.

Fast forwarding to the present, Dr. Davis argued that in the case of South Korea, and Japan to a lesser extent, missile defense is technically feasible to a degree. Yet there are many questions surrounding missile defense. Countermeasures are now available, it is very difficult to gauge the probability of success, the system is limited by numbers, and it is expensive. Many of these tough questions are fundamentally different for South Korean than for other countries. If one is going to go down that path, why spend money on bad systems? In South Korea's case, lots of the nuts and bolts, such as intelligence and command and control, are useful but are they worth it if only few systems are bought?

After Dr. Davis' remarks, the audience posed a few questions to the panelists.

Q: What are the implications for ROK force posture of the discussion about "mutual vulnerability"?

Dr. Kim argued that South Korea needs defense and deterrence. It is not about which is wrong because both are right. Instead, the question is how to assess threats and how to allocate resources accordingly. Continued North Korean provocations are a large threat. If North Korea is allowed to continue, South Korea will lose their right to respond. More investments in capabilities such as stealth fighters, ground missiles, and submarines can help show that South Korea has the capability and the will to respond.

Q: Taking the discussion to South Asia and the Middle East, there are strong views in both directions about U.S. missile defense. Would transfer of technology to these regions further enhance the arms race?

Dr. Bonomo pointed out the U.S. Terminal High Altitude Area Defense (THAAD) and Aegis capabilities are very unlikely to provided assured defense against nuclear attacks because many are not designed for that environment. Therefore, the ability to fundamentally hold cities at risk will not be affected. Missile defense does interrupt the ability of either side to execute small ballistic attacks, perhaps to gain an initial advantage, with impunity. In terms of some sort of warfighting, defense can have interesting effects. It can raise the barrier to war because one side cannot just toss off a missile; they would have to toss a bigger missile. Arms races are when two sides are close together and have unlimited competition on missiles. Defenses could stabilize that.

Q: The Congressional Commission on the Strategic Posture of the United States stated that U.S. missile defense plans are not intended to undermine the viability of China's deterrent yet the United States is unwilling to accept limits on its missile defense. How should that circle be squared?

Dr. Davis argued that if the world were rational, this problem would not be difficult or it would be moot. In such a world, no advanced country would try to build such an ambitious system because it would not work. In reality, however, the world is not rational. Perceptions matter and actions are taken for posturing.

Dr. Bonomo pointed out that the Russians have a point. A technological surprise with 500 very capable missiles could create a very unstable arms race, or even a crisis. For South Korea, there is no way they could intercept all of the missiles that North Korea launch. A couple of nuclear weapons could simply be put at the very end when the missile defense assets had already been exhausted.

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